

19-7778



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D5312-1

Job Sheet 196989



Part No: D5312-1

Job Qty: 10 pcs

Part Name: Tie Down Bracket



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 6/26/19

Job Tracking No:

Due Date: 8/5/19

Created By: Kimberley Guerin

Type: Stock

Description:

Note: DWG REV A IPP REV:A 16.06.06 NEW ISSUE DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Waterjet - Flow - 1	10 pcs	8/5/19	8/5/19	0.17	1.15	Waterjet - Flow		JRB 10/31/19
120	QC 2	10 pcs	8/5/19	8/5/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		
							QC 2 - 8		
							QC 2 - 66		
							QC 2 - 64		
							QC 2 - 65		

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com



Container No: S228571

Part: D5312-1

Job No: 196989

Serial No/Batch: S228571

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 10/31/19

Plex 6/26/19 4:08 PM Dart.Guerin.Kimberley

130 HAAS 4 Axis - B4B	10 pcs	8/5/19	1.00 1.70	QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	JRB 12/31/14
				HAAS - 1 - B4B	
				HAAS - 2 - B4B	
				HAAS - 3 - B4B	
				HAAS - 4 - B4B	
140 QC 2	10 pcs	8/5/19	0.00 0.00	QC 2 - 1	
				QC 2 - 12	
				QC 2 - 14	
				QC 2 - 17	
				QC 2 - 19	
				QC 2 - 2	
				QC 2 - 20	
				QC 2 - 22	
				QC 2 - 23	
				QC 2 - 25	
				QC 2 - 32	
				QC 2 - 33	
				QC 2 - 35	
				QC 2 - 39	
				QC 2 - 4	
				QC 2 - 40	
				QC 2 - 44	
				QC 2 - 45	
				QC 2 - 48	
				QC 2 - 49	
				QC 2 - 50	
				QC 2 - 51	
				QC 2 - 52	
				QC 2 - 57	
				QC 2 - 62	
				QC 2 - 63	
				QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	
				QC 2 - 65	
				QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	
150 QC 8	10 pcs	8/5/19	0.00 0.00	QC 8 - 12	
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	
				QC 8 - 9	

DAS
64
9-89DAS
64
9-89

					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
160	Small Fab - 2 - B4B	10 pcs	8/5/19	0.00 0.54	Small Fab - 1 - B4B	DAS 58
					Small Fab - 2 - B4B	DAS 30
					Small Fab - 3 - B4B	NOV 06 2019
					Small Fab - 4 - B4B	9-89
					Small Fab - 5 - B4B	
					Small Fab - 6 - B4B	
					Small Fab - 7 - B4B	
170	QC 5	10 pcs	8/5/19	0.00 0.00	QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	NOV 07 2019 DAS 68
					QC 5 - 9	9-89
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
180	Outsource - 4 - Anodize	10 pcs	8/5/19	0.00 0.00	6R0002	KA 2019-11-07
190	Packaging 2-1 - Receive - B4B	10 pcs	8/5/19	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	NOV 15 2019
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	

				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
200	QC 6	10 pcs	8/5/19	0.00 0.00	QC 6 - 9
					QC 6 - 68
					QC 6 - 61
					QC 6 - 40
210	Packaging 3-1 - Stock - B4B	10 pcs	8/5/19	0.00 0.00	Packaging 3 - 1 - B4B
		9			Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B ✓
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
220	QC 21 - SA	10 pcs	8/5/19	0.00 0.00	QC 21 - SA - 21 ✓
		9			QC 21 - SA - 70
					QC 21 - SA - 53

Part Op 110 - 1-Cut as per Dwg ****GRAIN DIRECTION***
 Descriptions: 120 - (QC2- Inspect parts off machine FAI/FAIB)
 130 - (HAAS CNC Vertical Machine), ENGRAVE P/N AND DART LOGO AS PER DWG
 140 - (QC2- Inspect parts off machine FAI/FAIB)
 150 - (QC8- Inspect parts - second check)
 160 - 1- C'SINK HOLES AS PER DWG 2- BEND ON NC BRAKE AS PER DWG
 170 - (QC5- Inspect part completeness to step on W/O)

NOV 28 2019

ST 152 Oscar

ST 52

DAS
21
9-00

NOV 28 2019

180 - (Outsource process-Anodize per QSI017 4.1.10.1), ISSUE P/O: 45031 FINISH ANODIZE BLACK
AS PER DWG AND NOTE 2.

190 - (Receive & Inspect for Damage & Mat'l Certs)

200 - (QC6- All purchased or subcontracted products)

210 - (Identify as per dwg & Stock Location: _____)

220 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M6061T6S.250	6061T6 Sheet .250	1.1300 sf (.113 ea)	110-Waterjet - Flow - 1	<u>S159676</u>

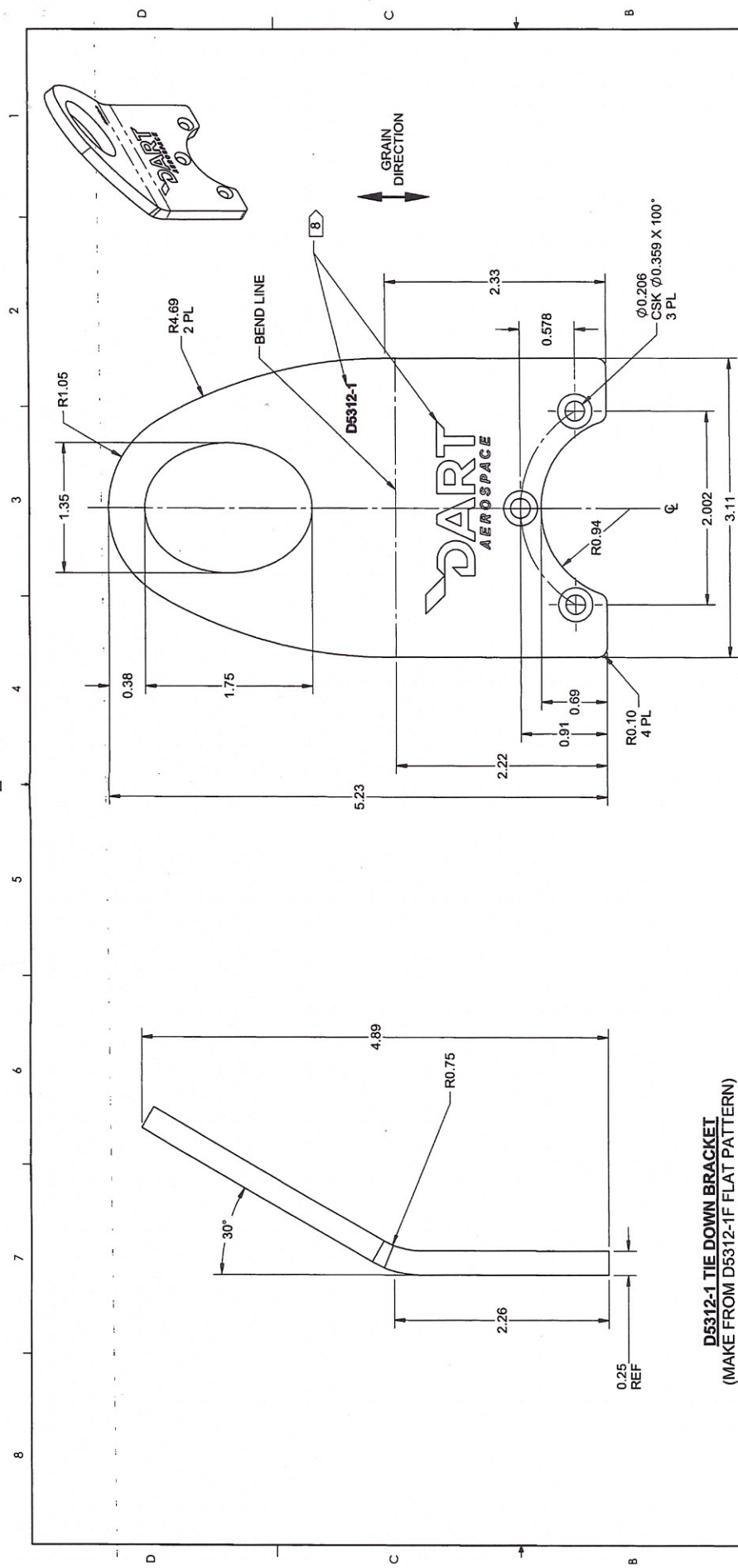
Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Waterjet - Flow - 1	M6061T6S.250	1	55	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Tie Down Bracket	0.206Inches + 0.005 - 0.001	0.211 0.205	0.209	Diameter
2	Tie Down Bracket	0.380Inches ± 0.030	0.410 0.350	0.390	
3	Tie Down Bracket	0.690Inches ± 0.030	0.720 0.660	0.691	
4	Tie Down Bracket	0.910Inches ± 0.030	0.940 0.880	0.916	
5	Tie Down Bracket	1.350Inches ± 0.030	1.380 1.320	1.340	
6	Tie Down Bracket	1.750Inches ± 0.030	1.780 1.720	1.736	
7	Tie Down Bracket	2.002Inches ± 0.010	2.012 1.992	2.001	
8	Tie Down Bracket	3.110Inches ± 0.030	3.140 3.080	3.120	
9	Tie Down Bracket	5.230Inches ± 0.030	5.260 5.200	5.24	
10	Tie Down Bracket	0.250Inches ± 0.010	0.260 0.240	0.257	

Plex 6/26/19 4:08 PM Dart.Guerin.Kimberley



D5312-1F FLAT PATTERN

D5312-1 TIE DOWN BRACKET
(MAKE FROM D5312-1F FLAT PATTERN)

NOTES:
1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.250" THK
PER QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027
OR ASTM B209
REF DART SPEC M6061T6S.250

- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR JIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI 044 6.3
- 7) WEIGHT: 0.28 lbs
- 8) ENGRAVE "DART" LOGO AND PART NUMBER BEFORE ANODIZING

RELEASED
R 2016-06-03
Ecn 16-593
On

APPROVED

REV.	NEW ISSUE	VS	BY	DATE
DESIGN	VS			
DRAWN	VS			
CHECKED	RF			
MFG. APPR.	JLM			
APPROVED	DW			
DE APPR.	DS			
DATE	15.09.28			

DESCRIPTION	VS	BY	DATE
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. D5312			
REV. A			
SHEET 1 OF 1			
SCALE			
TITLE TIE DOWN BRACKET			
DATE	15.09.28		

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB045031



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB045031

PO Date: 11/7/19

Due Date: 11/15/19

**Purchase Order
Revision:**

Revision Date:

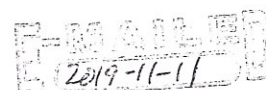
Ship-To Contact: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:



Items												
Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	196989	D5312-1	D5312 Rev A	Tie Down Bracket : Various STC's (Outsource process-Anodize per QSI017 4.1.10.1), ISSUE P/O: FINISH ANODIZE BLACK AS PER DWG AND NOTE 2.	Firmed X10	-	11/15/19	10 pcs	0 pcs	10 pcs	\$12.00/pcs	\$120.00
Grand Total:												\$120.00

NOV 15 2019

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

KGuerin

Plex 11/11/19 8:41 AM Dart.Guerin.Kimberley



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

SUBCONTRACT SHIPPER

SUBCONTRACT SHIP TO

SHIPPER

Ship To: Group Altech

2455 Halpern

St Laurent, QC H4S 1N9 Canada

Phone: 514-335-3666

Fax: 514-335-3868

Shipper No: 1711

Shipper Date: 11/7/19

Carrier: *

Ship Via:

Vehicle Reg:

Note:

Freight Terms:

Part Information

Part No: D5312-1

Cust Part No:

Reference No:

Part Information Note: DWG REV A IPP REV:A 16.06.06 NEW ISSUE DD
VERF:JLM

Drawing No:

Program:

Program Customer:

Add Docs:

Commercial: Product Line: Ground Support Equipment - Spare

Primary OEM Application: Bell

Manufacturer: DART

Advertised on web?: No

Name: Tie Down Bracket

Product Family: Ground Support Equipment

Piece Weight: 0 lbs

Alloy Type:

Alloy - Temper: -

Description: Various STC's

Quantity:

OPERATION

Operation: Outsource - 4 - Anodize - 180

Description: (Outsource process-Anodize per QSI017 4.1.10.1),
ISSUE P/O: _____ FINISH
ANODIZE BLACK AS PER DWG AND NOTE 2.

Note:

DETAIL

Part	Operation	PO	Job	Container	Heat Code	Net Weight (lbs)	Gross Weight (lbs)	Quantity
D5312-1	Outsource - 4 - Anodize (Outsource process-Anodize per QSI017 4.1.10.1), ISSUE P/O: _____ FINISH ANODIZE BLACK AS PER DWG AND NOTE 2.	POHB045031	196989	S228571		0	0	10

Driver Signature

Customer Copy

Plex 11/7/19 1:14 PM Dart.Guerin.Kimberley



Certificat de Conformité / Certificate of Compliance

(023961-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

023961 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
13-Nov-2019		Jigar Patel		POHB045031				
#Ligne Line#	No. de Série / # Pièce Part Number /Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Quantités / Quantities				
				Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	D5312-1 Rev.A	D5312 01 -ANO-BLACK [ANODIZE BLACK] MIL-8625F TYPE - I OR IB OR IC OR II OR IIB CLASS - 2 AS PER QSI017 4.1.10.1 AS PER DRAWING AND NOTE - 2	ANODIZE CH	10	10	0	0	0
RECEIVED NOV 14 2019 DART AEROSPACE LTD.								

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.

Entered:

Date:

Dec 30/19

NCR No.

19-7778

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only



Job: 196939		DISPOSITION		DEPARTMENT/PROCESS		Engineering	
Part No. D5312.1		Rework ☒ Scrap ☐ Use-as-is ☐		Skid-tube ☐ Machining ☐ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐	
Date: 19.11.18		Sequence #: 200		QTY Affected: 9		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐	
Description Work Order Deviation				Disposition			
Notice at QCL that countersink was not deep enough.				Slip work order, one will be acceptable with eng. sign off to fulfill a order. (on Job 196939-A) And qty 9 to be rework: - countersink per drawing - outsource for re analyze.			
Root Cause				FAULT CATEGORY			
Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐				Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐			
Other/Details:				Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☒ Fit/Function ☐			
				Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐			
				Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐			
				DA Completed By 58 NOV 19 2019 Lead hand / Supervisor PD 19.11.28 QC / QA Coordinator PD 19.11.28			



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045181



Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

Attention: Grenon, Sylvie

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB045181

PO Date: 11/22/19

Due Date: 12/2/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground

Pynt Terms: Net 60

Freight Terms:

Special Comments:

E-MAILED
2019-11-25

Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	201784	RBD29822-3	RBD29822 Rev 2	Tail Rotor Swash Plate Holding Block -Issue P/O: _____ -ANODIZE COLOR BLACK, PER IAW MIL-A-8625F TYPE 2 CLASS 2, Water sealant -Material type: 6061T6 -Certificate of Conformity is required	Firmed	-	12/2/19	5 pcs	0 pcs	5 pcs	\$8.5714/pcs	\$42.86
2	196989	D5312-1	D5312 Rev A	Tie Down Bracket : Various STC's (Outsource process-Anodize per QSI017 4.1.10.1), 1-Create P/O: _____ 2-STRIP AND RE ANODIZE 3-FINISH ANODIZE BLACK AS PER DWG AND NOTE 2.	Firmed	-	12/2/19	9 pcs	0 pcs	9 pcs	\$10.7936/pcs	\$97.14
Grand Total:												\$140.00

Handwritten signature: Guerin



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045181



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/25/19 12:56 PM Dart.Guerin.Kimberley



Certificat de Conformité / Certificate of Compliance

(024385-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

024385- 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
27-Nov-2019		Jigar Patel		POHB045181				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG. U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	À venir/ Back Order
1	RBD29822-3 Rev.2	RBD29822 ANO-BLACK [ANODIZE-BLACK] AS PER IAW MIL-A-8625F TYPE - 2, CLASS - 2 WATER SEALANT	ANODIZE CH	5	5	0	0	0
2	D5312-1 Rev.A	D5312 STRIP ANO-BLACK [ANODIZE-BLACK] MIL-8625F TYPE - I OR IB OR IC OR II OR IIB CLASS - 2 AS PER QSI017 4.1.10.1 AS PER DRAWING AND NOTE - 2	ANODIZE CH	9	9	0	0	0
3	STRIPPING CHARGES Rev.	STRIPPING CHARGES STRIP	STRIP LOT	9	9	0	0	0

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 DART AEROSPACE LTD.

Notes Additionnelles / Additional Notes

Épaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.

19-7778



Dart Aerospace Ltd.
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Hawkesbury, ON
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D5312-1**Job Sheet 196989**

SPLIT + REPRINT

Part No: D5312-1**Job Qty:** 9 pcs**Part Name:** Tie Down Bracket**Part Weight:** 0 lbs**Status:** Scheduled**Priority:** Medium**Job Created:** 6/26/19**Job Tracking No:****Due Date:** 11/26/19**Created By:** Kimberley Guerin**Type:** Stock**Description:****Note:** DWG REV A IPP REV:A 16.06.06 NEW ISSUE DD VERF:JLM**Ship Via:****Bill of Materials****Job Routing**

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
110	Waterjet - Flow - 1	9 pcs		11/26/19	0.17	1.03	Waterjet - Flow		
120	QC 2	9 pcs		11/26/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		
							QC 2 - 63		
							QC 2 - 8		
							QC 2 - 66		
							QC 2 - 64		
							QC 2 - 65		

See Attached
for original w/o

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					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
					HAAS - 1 - B4B	
130 HAAS 4 Axis - B4B	9 pcs	11/26/19	1.00	1.53	HAAS - 2 - B4B	
					HAAS - 3 - B4B	
					HAAS - 4 - B4B	
140 QC 2	9 pcs	11/26/19	0.00	0.00	QC 2 - 1	
					QC 2 - 12	
					QC 2 - 14	
					QC 2 - 17	
					QC 2 - 19	
					QC 2 - 2	
					QC 2 - 20	
					QC 2 - 22	
					QC 2 - 23	
					QC 2 - 25	
					QC 2 - 32	
					QC 2 - 33	
					QC 2 - 35	
					QC 2 - 39	
					QC 2 - 4	
					QC 2 - 40	
					QC 2 - 44	
					QC 2 - 45	
					QC 2 - 48	
					QC 2 - 49	
					QC 2 - 50	
					QC 2 - 51	
					QC 2 - 52	
					QC 2 - 57	
					QC 2 - 62	
					QC 2 - 63	
					QC 2 - 8	
					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
150 QC 8	9 pcs	11/26/19	0.00	0.00	QC 8 - 12	
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	

See Attached
for original

					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
160	Small Fab - 2 - B4B	9 pcs	11/26/19	0.00 0.49	Small Fab - 1 - B4B	
					Small Fab - 2 - B4B	
					Small Fab - 3 - B4B	
					Small Fab - 4 - B4B	
					Small Fab - 5 - B4B	
					Small Fab - 6 - B4B	
					Small Fab - 7 - B4B	
170	QC 5	9 pcs	11/26/19	0.00 0.00	QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	
180	Outsource - 4 - Anodize	9 pcs	11/26/19		GRO002-VC	5
190	Packaging 2-1 - Receive - B4B	9 pcs	11/26/19	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	

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				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
191	Rework - 1 - Startup	9 pcs	11/26/19	0.00 0.00	Small Fab - 1
192	Rework - 2 - B4B	9 pcs	11/26/19	0.00 0.00	QC 5 - 10
193	Outsource - 7 - Rework	9 pcs	11/26/19		GRO002-VC
194	Rework - 3 - B4B	9 pcs	11/26/19	0.00 0.00	Packaging 2 - 3 B4B
200	QC 6	9 pcs	11/26/19	0.00 0.00	QC 6 - 9
					QC 6 - 68
					QC 6 - 61
					QC 6 - 40
210	Packaging 3-1 - Stock - B4B	9 pcs	11/26/19	0.00 0.00	Packaging 3 - 1 - B4B
					Packaging 3 - 2 - B4B
					Packaging 3 - 3 - B4B
					Packaging 3 - 4 - B4B
					Packaging 3 - 5 - B4B
					Packaging 3 - 6 - B4B
					Packaging 3 - 7 - B4B
					Packaging 3 - 8 - B4B
					Packaging 3 - 9 - B4B
					Packaging 3 - 10 - B4B
					Packaging 3 - 11 - B4B
					Packaging 3 - 12 - B4B
					Packaging 3 - 13 - B4B
					Packaging 3 - 14 - B4B
					Packaging 3 - 15 - B4B
					Packaging 3 - 16 - B4B
					Packaging 3 - 17 - B4B
					Packaging 3 - 18 - B4B
					Packaging 3 - 19 - B4B
					Packaging 3 - 20 - B4B
					Packaging 3 - 21 - B4B
					Packaging 3 - 22 - B4B
					Packaging 3 - 23 - B4B
					Packaging 3 - 24 - B4B
					Packaging 3 - 25 - B4B
					Packaging 3 - 26 - B4B
					Packaging 3 - 27 - B4B
					Packaging 3 - 28 - B4B
					Packaging 3 - 29 - B4B
					Packaging 3 - 30 - B4B
					Packaging 3 - 31 - B4B
					Packaging 3 - 32 - B4B
					Packaging 3 - 33 - B4B
					Packaging 3 - 34 - B4B
					Packaging 3 - 35 - B4B
					Packaging 3 - 36 - B4B
220	QC 21 - SA	9 pcs	11/26/19	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
					QC 21 - SA - 53

Part Op 110 - 1-Cut as per Dwg ****GRAIN DIRECTION***
 Descriptions: 120 - (QC2- Inspect parts off machine FAI/FAIB)

130 - (HAAS CNC Vertical Machine), ENGRAVE P/N AND DART LOGO AS PER DWG

140 - (QC2- Inspect parts off machine FAI/FAIB)

150 - (QC8- Inspect parts - second check)

160 - 1- C'SINK HOLES AS PER DWG 2- BEND ON NC BRAKE AS PER DWG

170 - (QC5- Inspect part completeness to step on W/O)

180 - (Outsource process-Anodize per QSI017 4.1.10.1), ISSUE P/O: _____ FINISH ANODIZE BLACK AS PER DWG AND NOTE 2.

190 - (Receive & Inspect for Damage & Mat'l Certs)

191 - Fix counter sinks as per NCR.

192 - (QC5- Inspect part completeness to step on W/O)

193 - (Outsource process-Anodize per QSI017 4.1.10.1), 1-SUE P/O: 45181 2-STRIP AND RE ANODIZE 3-FINISH ANODIZE BLACK AS PER DWG AND NOTE 2.

194 - (Pac2-Receive & Inspect for Damage & Mat'l Certs.)

200 - (QC6- All purchased or subcontracted products)

210 - (Identify as per dwg & Stock Location: _____)

220 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M6061T6S.250	6061T6 Sheet .250	1.0170 sf (.113 ea)	110-Waterjet - Flow - 1	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Waterjet - Flow - 1	M6061T6S.250	1	62	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Tie Down Bracket	0.206Inches + 0.005 - 0.001	0.211 0.205	Diameter	
2	Tie Down Bracket	0.380Inches ± 0.030	0.410 0.350		
3	Tie Down Bracket	0.690Inches ± 0.030	0.720 0.660		
4	Tie Down Bracket	0.910Inches ± 0.030	0.940 0.880		
5	Tie Down Bracket	1.350Inches ± 0.030	1.380 1.320		
6	Tie Down Bracket	1.750Inches ± 0.030	1.780 1.720		
7	Tie Down Bracket	2.002Inches ± 0.010	2.012 1.992		
8	Tie Down Bracket	3.110Inches ± 0.030	3.140 3.080		
9	Tie Down Bracket	5.230Inches ± 0.030	5.260 5.200		
10	Tie Down Bracket	0.250Inches ± 0.010	0.260 0.240		

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